

reference discussed below. The addition of the expression a "sufficient number of oligo [meth-]acrylamide derivative side chains to form a gel" is merely an explicit statement of what is already inherent in the specification.

The Examiner requests that we cite evidence of the inherency in the specification for the added language. The Examiner agrees that the specification discloses that the materials form a reversible gel but does not understand that this necessarily means that the specification discloses a sufficient number of oligo [meth-]acrylamide derivative side chains such that the copolymer forms a reversible gel. However, this information is readily apparent to one of ordinary skill in the art reading the present specification.

Specifically, the specification discloses compositions having a sufficient number of oligo [meth-]acrylamide derivative side chains to form a thermally reversible gel and methods for making the same. These recitations inherently disclose the added language. For example, on page 11 of the specification, a method is recited wherein a reversible copolymer "is obtained by grafting of the oligo [meth-]acrylamide derivative side chains on a biodegradable polymer . . . ." This statement plainly would be understood by one of ordinary skill in the art (really any polymer chemist) to necessarily mean that a sufficient number of side chains is present. There is clearly only one approach to obtain the recited gel: to systematically increase the number of grafted chains until one obtains a graft copolymer capable of forming a thermally reversible gel. Put another way, as is clear to most any polymer chemist, the presence of a sufficient number of side chains is the ONLY possible manner to form the gel of the disclosed and claimed compounds, i.e., graft copolymers of oligo [meth-]acrylamide derivative side chains.

In other words, these compositions **MUST** have a sufficient number of such side chains or else a reversible gel will not form. A person of ordinary skill in the art would understand from the methods disclosed in the specification along with the composition descriptions provided that the chemistry disclosed requires a minimum critical concentration of such thermosensitive chains to form a thermally gelling polymer network, i.e., a temperature sensitive reversible gel. The "sufficient number of side chains" language is inherent in the disclosure.

Because one of ordinary skill in the art would recognize that to obtain the compositions to gel reversibly would require including a sufficient number of side chains be

present and because the method steps disclosed on, for example, page 11 of the specification further makes this clear, no new matter has been added to the specification or the claims.

**§112 Rejection to Claims 31-36 is Moot in View of Response Regarding New Matter**

The Examiner rejects claims 31-36 under §112 alleging that claims 31-36 include a limitation that is not supported by the specification (i.e., "a sufficient number of oligo [meth-]acrylamide derivative side chains such that the copolymer forms a reversible gel."). Applicants traverse.

Because the language added to the specification is inherent in the specification as discussed above, the claim limitations are clearly sufficiently supported. Even if such language were not added to the specification, for the reasons set forth above, the specification inherently requires a sufficient number of oligo [meth-]acrylamide derivative side chains such that the graft copolymer forms a thermally reversible gel and supports the claim language. Accordingly, the rejection under §112 should be withdrawn and Applicants respectfully request such action.

**Hoffman Neither Teaches Nor Suggests the Compositions of the Present Claims**

The Examiner rejects claims 1-12 and 31-36 as allegedly being anticipated under §102(e) or alternatively as allegedly being obvious under §103(a) in view of Hoffman (U.S. Patent No. 5,998,588). Applicants traverse.

As stated in previous responses, Hoffman neither teaches nor suggests a linear random copolymer including a hydrophilic comonomer in an amount wherein gelation occurs upon heating, as recited in claims 1-12. The Examiner has not identified where the Hoffman disclosure discloses such a hydrophilic comonomer because **Hoffman completely fails to disclose such a hydrophilic comonomer.** (As set forth in previous responses, Hoffman does not even teach or suggest a composition that forms a gel.) Accordingly, the rejection of claims 1-12 is improper and should be withdrawn.

Likewise, Hoffman neither teaches nor suggests a thermally reversible graft copolymer that forms a reversible gel, as recited in claims 31-36. All of the pending claims require that the copolymer form a reversible gel. As stated in previous responses, Hoffman does not teach or suggest forming a reversible gel. As the claims require such and Hoffman does not teach or even suggest such, the claims can neither be anticipated nor obviated by Hoffman.

Moreover, the further limitation added to the claims via the Preliminary Amendment (dated April 25, 2002) further clarifies the differences between the Hoffman polymers and the claimed reversible copolymer gels recited in claims 31-36. Specifically, claims 31-36 expressly recite that a sufficient number of oligo [meth-]acrylamide derivative side chains are included in order for the composition to form a thermally reversible gel. Clearly, the Hoffman non-gelling compositions are not within the scope of the present claims.

Because Hoffman neither teaches nor suggests the claimed reversible gelling copolymers, claims 1-12 and 31-36 are allowable and the rejections must be withdrawn.

**Claims 31-36 are Sufficiently Clear to One of Ordinary Skill in the Art**

The Examiner rejects claims 31-36 alleging that the claims are indefinite under §112, second paragraph because the claims appear to recite a characteristic rather than a component. Applicants traverse this rejection.

The limitation of "such that said biodegradable thermally reversible graft copolymer forms a reversible gel" further clarifies that the copolymer includes a sufficient number of side chains of homo-oligomers of [meth-]acrylamide derivatives and co-oligomers of [meth-]acrylamide derivatives copolymerized with hydrophilic comonomers to form a reversible, gelling copolymer. Not only is this limitation in an allowable format, the claim limitation (and the claim as a whole) is sufficiently definite to those persons of ordinary skill in the art so as to satisfy the requirements of §112. There is nothing indefinite in such claim language and accordingly, the §112 rejection is improper and must be withdrawn.

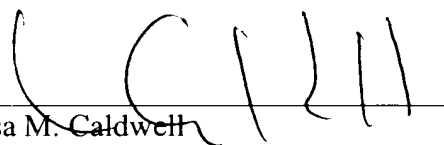
Based on at least the foregoing remarks, the claims of the present application are allowable over the art of record and notification to that effect is respectfully requested. If the

Examiner has any questions or requires further clarification, he is invited to call the undersigned at the telephone number listed below.

Respectfully submitted,

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